

REMARKS

After entry of the present Amendment, claims 1-9 are pending in the Application. Claims 2 and 9 were amended. Applicants respectfully assert that no new matter is introduced by these amendments. Basis for the amendment to claim 2 is found in the specification at least at page 3, line 29 to page 4, line 2 (definition of "a plant derived from the seed deposited as Accession Number PTA-2759"). The recitation of "selfing" in claim 9 is supported at least at page 6, lines 20-22.

The pending claims stand variously rejected. Each rejection is respectfully traversed as discussed below. Applicants respectfully submit that the presently pending claims are in condition for allowance and earnestly solicit notification to that effect.

Rejection of claim 9 under 35 U.S.C. § 112, second paragraph

In the Office Action, claim 9 stands rejected as indefinite for the recitation of "crossing only." In order to advance prosecution, and not to acquiesce to the rejection, Applicants have amended claim 9 to replace "crossing only" with "selfing," as described in the specification at least at page 6, lines 20-22.

It is believed that the amendment obviates the rejection. Notification to that effect is earnestly solicited.

Rejection of claims 1-9 under 35 U.S.C. § 112, first paragraph

In the Office Action, claims 1-9 stand rejected as not enabled. The Examiner maintains that the utilization of synthetic variety Thor renders the claimed invention a synthetic variety, and further maintains that Applicants have failed to specify genetic or pedigree information regarding other parental lines. Moreover, the Examiner maintains that there is insufficient information in the specification regarding genetic or molecular markers that may be used to determine hybridity.

Applicants respectfully traverse the rejection for the reasons of record. The Declaration of Dr. Sun, submitted with the previous Response, provides clear and convincing evidence that one of skill in the art would understand from the specification that the hybrid components of the claimed invention are not synthetic varieties, but rather, selected clones, or the S1 progeny of selected clones, of alfalfa. *See* Sun Decl. para. 9. For the reasons of record, Applicants strongly assert that the specification adequately describes the selected parental components and provides adequate guidance to one of skill in the art to make and use the claimed invention.

Moreover, the enablement rejection of claims 1-4 is traversed on the basis of the ATCC deposit. Claims 1-4 are directed to the seed deposited as ATCC Accession Number PTA-2759, plants grown directly from the seed deposited as ATCC Accession Number PTA-2759, or plants grown indirectly (i.e., clonally or from vegetative cuttings, etc.) from the seed deposited as ATCC Accession Number PTA-2759, and pollen and ovules produced from the plants grown directly from the deposited seed. It is well established that a deposit of seed enables claims to the seed, to the plants grown from the seed, and to plants clonally produced from plants grown from the seed. See, e.g., Appeal No. 92-0393 from Art Unit 1804, 27 USPQ2d 1492 (BPAI 1992) (“There is no question that one having seeds available through the ATCC depository would be enabled to grow a plant and produce additional seeds therefrom.”).

With respect to determining the percent hybridity using molecular markers, the specification provides ample guidance to the skilled artisan, at least in the form of a working example. Four primer sequences (SEQ ID NOS: 1-4) are provided and the specification discloses which primer pair combinations identify the greatest number of polymorphisms using AFLP techniques. Page 10, lines 6-21. It is respectfully asserted that the claimed method and subsequent verification of hybridity using the routine AFLP procedure with the primer combinations provided enables the full scope of the claims in light of the high level of skill in the art.

The undersigned, a representative of Applicants, avers that all restrictions upon public availability of the seed deposited as ATCC Accession Number PTA-2759 will be irrevocably removed upon the granting of the patent.

Rejection of claims 1-4 under 35 U.S.C. § 102(b)/ §103

In the Office Action, claims 1-4 stand rejected as anticipated over Northrup *et al.* Claims 2-4 stand rejected as anticipated by, or in the alternative, as obvious over Northrup *et al.* and Thompson *et al.* These rejections are respectfully traversed.

The rejections stem from the Examiner’s continued insistence that the claimed invention is developed using the synthetic variety Thor rather than a selected line of Thor, a proposition that Applicants continue to strenuously dispute, as discussed above.

Moreover, the Examiner has substituted a definition of “derived from” that is inconsistent with the express definition provided in the specification. Office Action, page 5, last paragraph. For reasons of clarity, Applicants have therefore amended claim 2 to replace the term “derived from” with “grown directly from the seed deposited as ATCC Accession

Number PTA-2759, or a plant grown from a vegetative cutting, callus or tissue culture obtained from a plant part grown from the seed deposited as ATCC Accession Number PTA-2759, or a clonal plant thereof.” Applicants assert that the amendment makes clear that claims 1-4 are in no way anticipated by Northrup *et al.* or obvious over Northrup *et al.* in view of Thompson *et al.*

For these reasons, Applicants respectfully request withdrawal of the rejections and notification to that effect.

Rejections under 35 U.S.C. §103

In the Office Action, claims 5-6 and 9 stand rejected as obvious over Sun *et al.* Claims 5-7 stand rejected as obvious over Sun *et al.* in view of Viands *et al.* Claims 5 and 8 stand rejected as obvious over Sun *et al.* in view of Rotili *et al.*, in further view of Vos *et al.* These rejections are respectfully traversed.

In the Office Action, the Examiner maintains that the Applicants have not demonstrated any advantage in using a planting ratio of 4:1 and that the increase in the planting ratio over that used in Sun *et al.* does not provide unexpected results.

However, Applicants respectfully assert that it is the Office’s initial burden to demonstrate *prima facie* obviousness, not Applicants’ burden to demonstrate unexpected results in the first instance. MPEP 2142. The Examiner has not established obviousness of the claimed invention over the cited references, and Applicants are not therefore required to show unexpected results to establish non-obviousness of the presently claimed invention.

To establish *prima facie* obviousness: 1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the teachings; 2) there must be a reasonable expectation of success; and 3) the references must teach or suggest all of the claimed limitations. MPEP 2142. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Moreover, the references must be considered in their entirety, including portions that teach away from the claimed invention. MPEP 2141.02.

Applicants respectfully assert that all of the claim limitations are not taught or suggested by the cited art, there is no suggestion to modify or combine the cited art to arrive at the claimed invention, there is no reasonable expectation of success, and the primary reference actually teaches away from the claimed invention.

As acknowledged by the Examiner, none of the references teach or suggest a planting ratio of 4:1, and as Applicants have previously asserted, the primary reference actually teaches away from using a 4:1 ratio: "the ratio of male sterile to male fertile alfalfa plants must be in the range of 1:1 to 3:1." Column 3, lines 13-17. Proceeding contrary to the accepted wisdom in the art is evidence of non-obviousness. MPEP 2145. None of the secondary references cure this deficiency by teaching or suggesting the claimed ratio.

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. MPEP 2143.03, citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

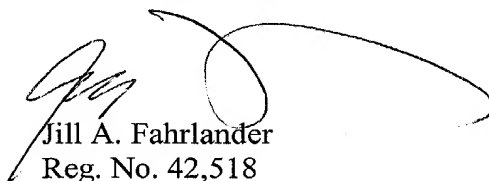
Because the Office has not established a prima facie case of obviousness with respect to the rejected claims, withdrawal of the rejection is respectfully requested.

CONCLUSION

In view of the foregoing, reconsideration and allowance of claims is respectfully requested. The Examiner is encouraged to contact the undersigned by telephone at the Examiner's convenience should any issues remain with respect to the Application.

This response is accompanied by a check in the amount of \$160.00 to cover the cost of filing the Notice of Appeal. Charge or credit Deposit Account No. 13-3080 with any shortage or overpayment of the fees associated with this communication.

Respectfully submitted,


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